Code Refactoring

“The Write Way”

Python

The first part of the code refactoring was done on the python file “**app.py**”.

I. I had used the ‘Mark-up’ feature of Flask to display the entire message which included a lot of mark-up tags, while this was great for testing and troubleshooting, the python file quickly started to messy. I moved the vast majority of the mark-up to the templates keeping the flash text as short as I could. The total savings here were over 600 characters.

II. As part of the testing and troubleshooting I used a lot of ‘print’ statements in the various functions to see what the code was doing at particular times, removing these cleaned up the code by another 100 characters.

III. I hadn’t realised until I reach near the end of the project that I had named my collection in camel case instead of snake case to be in line with python naming convention. Since there doesn’t seemed to be an option to ‘rename collection’ in the gui interface, I found it easier to just write a function to do it as below, this function was not included in the final draft of the project.

```
def changename():
      mongo.db.shortStories.rename('shortstories')
 return print('name changed')
```

IV. Due to testing I had added the flash messages directly into the function, while it was easier in the testing and troubleshooting phase it made the code look very untidy, so I allocated the flash messages to variables at the top of the file as below.

```
JOIN_MESSAGE_FAILURE = Markup(" is already<br> registered as a 'Pen Name'")
JOIN_MESSAGE_SUCCESS = Markup("<br>'Your Registration Was Successful!'")
PASSWORD_MESSAGE_FAILURE = "Please Check Your Username and Password"
PASSWORD_MESSAGE_SUCCESS = "Your Password Was reset!"
SIGNIN_MESSAGE_FAILURE = "You are not Logged in"
SIGNOUT_FAILURE = "You are not Signed In"
SIGNOUT_SUCCESS = "Sign Out Was Successful!"
CREATE_SUCCESS = "Well Done for getting your story published"
EDIT_FAILURE = "Invalid action for user profile"
UPDATE_SUCCESS = "The Story Has Been Updated"
DELETE_SUCCESS = "Congratulations The Story Was Deleted"
POPULARITY_FAILURE = Markup("You Need To Be Signed In<br>to 'Like' A Story")
```

V. Towards the end of the project I ran a linter for the python file. I used ‘pylint’ based on recommendations. This was installed into Gitpod at the terminal using the command ‘pip3 install pylint’.

The linter picked up a lot of indentation issues, whitespaces and some unnecessary code like unneeded ‘else’ statements. I also added proper docstrings to all functions as well as identifying a couple of unused variables. The result left me with some warnings as below.

```
gitpod /workspace/The_Write_Way $ pylint app.py -s y
************* Module app
app.py:1:0: C0114: Missing module docstring (missing-module-docstring)
app.py:63:4: W0621: Redefining name 'crime' from outer scope (line 60) (redefined-outer-name)
app.py:71:4: W0621: Redefining name 'fantasy' from outer scope (line 68) (redefined-outer-name)
app.py:80:4: W0621: Redefining name 'fiction' from outer scope (line 77) (redefined-outer-name)
app.py:89:4: W0621: Redefining name 'history' from outer scope (line 86) (redefined-outer-name)
app.py:98:4: W0621: Redefining name 'horror' from outer scope (line 95) (redefined-outer-name)
app.py:107:4: W0621: Redefining name 'thriller' from outer scope (line 104) (redefined-outer-name)
app.py:8:4: W0611: Unused import env (unused-import)

-------------------------------------------------------------------
Your code has been rated at 9.53/10 (previous run: 9.53/10, +0.00)
```

The 6 genres used in the project are crime, fantasy, fiction, history, horror and thriller with correspondingly named functions in app.py. The urls I render from a loop in genre.html and expect to point to a corresponding file of the same name url_for(‘fiction’) > fiction.html. Renaming these functions at the very end of project gave too many problems and I did not have the time before submission to go in and change how the functionality worked.
The other 2 warning were expected for the ‘import Os’ module and the ‘env’ module.